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REMARKS

Status Summary

Claims 1-17 are pending in the present application. Claims 1-17 presently stand rejected. Claims 1, 3, 6-11, and 14-17 have been amended by the present amendment. New Claims 18-20 are added by the present amendment. Therefore, upon entry of Amendment A, Claims 1-20 will remain pending in the subject patent application.

Claim Rejections – 35 U.S.C. §112

Claims 1, 2, and 6-17 stand rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing in particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that there is no definition of the linking group L in Claim 1 and thus its metes and bounds cannot be determined.

In response to the Examiner's comments, applicants amended Claim 1 to recite a definition of the linking group L. Support for this amendment can be found in original Claim 3 of the application as filed and on pages 6 and 7 of the published PCT Application No. WO 01/25336 A1 (hereinafter the "336 published PCT application"). Applicants respectfully submit that the 35 U.S.C. § 112, second paragraph, rejection to Claim 1 has been overcome by this amendment and Claim 1 is allowable as amended. Applicants further submit

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that dependent Claims 2, and 6-17 are also allowable since they depend from Claim 1 and merely add additional limitations thereto.

Claims 3-5 stand rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that there is no definition of Y in Claim 3 and that since Claim 3 is an independent claim, it must define all of the components of the claimed subject matter.

In response to the Examiner's comments, applicants amended Claim 3 to recite a definition of Y. Support for this amendment can be found on pages 5 and 6 of the '336 published PCT application and in original Claim 1 of the application as filed. Applicants respectfully submit that the 35 U.S.C. § 112, second paragraph, rejection to Claim 3 has been overcome by this amendment and Claim 3 is allowable as amended. Applicants further submit that dependent Claims 4 and 5 are also allowable since they depend from Claim 3 and merely add additional limitations thereto.

Claims 12, 16 and 17 stand rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. First, the Examiner contends that there is no antecedent basis in Claim 1 or Claim 12 for "the acid buffer" recited on line 1 of Claim 16. Second, the

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Examiner contends that there is no antecedent basis for a pH range as recited in Claim 17 as there is no pH range recited in either Claim 1 or Claim 12.

First, in response to the Examiner's assertion that there is no antecedent basis in Claim 1 or Claim 12 for "the acid buffer" recited on line 1 of Claim 16, applicants amended Claim 16 to be dependent from original Claim 13, which recites a dye composition in the form of a solid mixture, further comprising an acid buffer. Support for this amendment can be found on page 10, lines 6-8, of the '336 published PCT application and original Claims 13 and 16 of the application as filed.

Applicants submit that the above amendment provides an antecedent basis for "the acid buffer" recited on line 1 of Claim 16. Applicants therefore respectfully request that the rejection of Claim 16 under 35 U.S.C. § 112, second paragraph, be withdrawn and Claim 16 be allowed at this time. Applicants further submit that in view of the above amendment, which removes the dependency of Claim 16 from Claim 12, an antecedent basis for "the acid buffer" is no longer required in Claim 12. Applicants therefore request that the rejection of Claim 12 under 35 U.S.C. § 112, second paragraph, be withdrawn and Claim 12 be allowed at this time.

Second, in response to the Examiner's assertion that there is no antecedent basis for a pH range as recited in Claim 17 as there is no pH range recited in either Claim 1 or Claim 12, applicants amended Claim 14 to recite a dye composition that preferably has a pH from about 2 to about 8 and amended

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Claim 17 to be dependent from amended Claim 14. Support for these amendments to Claims 14 and 17 can be found on page 10, lines 12-14 of the '336 published PCT application.

Applicants submit that the above amendment provides an antecedent basis for "a pH range" as recited in Claim 17. Applicants therefore respectfully request that the rejection of Claim 17 under 35 U.S.C. § 112, second paragraph, be withdrawn and Claim 17 be allowed at this time. Applicants further submit that in view of the above amendment, which removes the dependency of Claim 17 from Claim 12, an antecedent basis for "a pH range" is no longer required in Claim 12. Applicants therefore respectfully request that the rejection of Claim 12 under 35 U.S.C. § 112, second paragraph, be withdrawn and Claim 12 be allowed at this time.

Applicants further amended Claim 15 to recite a dye composition that preferably has a pH from about 2 to about 8 to provide an antecedent basis for the pH range recited in new Claim 20. Support for this amendment to Claim 15 can be found on page 10, lines 12-14 of the '336 published PCT application. Applicants respectfully submit that amended Claim 15 is in condition for allowance and respectfully request the same.

Finally, Claims 6-11 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that Claims 6-11 provide for the use of the compound of

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Claim 1, but since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intended to encompass.

In response to the Examiner's comments, by way of a clarifying, non-limiting amendment, applicants amended Claims 6-11 in accordance with § 2173.05(q) of the Manual of Patent Examining Procedure to set forth a step, e.g., contacting a substrate with a compound, involved in the process. Applicants submit that Claims 6-11 as amended particularly point out and distinctly claim the subject matter disclosed in the instant application. Applicants therefore respectfully request that the rejection of Claims 6-11 under 35 U.S.C. § 112, second paragraph, be withdrawn and Claims 6-11 be allowed at this time.

In sum, applicants have addressed all issues raised by the Examiner and submit that the 35 U.S.C. § 112 rejections have been overcome by applicants' amendments as set forth herein, and therefore request formal withdrawal of the rejections.

Claim Rejections – 35 U.S.C. § 101

Claims 6-11 stand rejected by the Examiner under 35 U.S.C. § 101 based on the contention that the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. § 101.

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In response to the Examiner's comments, by way of a clarifying, non-limiting amendment, applicants amended Claims 6-11 in accordance with § 2173.05(q) of the Manual of Patent Examining Procedure to set forth a step, e.g., contacting a substrate with a compound, involved in the process. Applicants submit that Claims 6-11 as amended are proper process claims under 35 U.S.C. § 101. Applicants therefore respectfully request that the rejection of Claims 6-11 under 35 U.S.C. § 101 be withdrawn and Claims 6-11 be allowed at this time.

In sum, applicants have addressed all issues raised by the Examiner and submit that the 35 U.S.C. § 101 rejections have been overcome by applicants' amendments as set forth herein, and therefore request formal withdrawal of the rejections.

Claim Rejections - 35 U.S.C. § 102

Claims 1 and 3-13 stand rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,663,576 to Meininger et al. (hereinafter referred to "Meininger et al."). The Examiner contends that the applicant discloses fiber-reactive anthraquinone dye comprising a phosphonate group attached to a beta-ethysulfonyl group and that said group is attached to the anilino component of the anthraquinon chromophore. Therefore, the Examiner contends that applicant's (a) component, a chromophore, is attached directly via the S atom to the anilino component of the chromophore or by the

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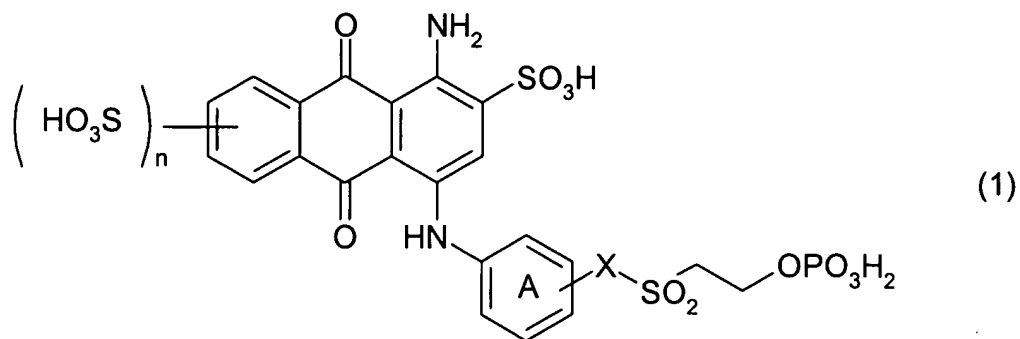
groups listed in column 1, lines 30-31, of Meininger et al. The Examiner also points out the dye in the abstract of Meininger et al. and the process of formation of the dyestuff in column 2. Finally the Examiner states that the dyes are used to dye hydroxy and amino containing materials: wool, silk, linear polyamides, leather linen, regenerated cellulose and cotton based on column 4, lines 4 through 8. Therefore, the Examiner contends that all of the limitations of the subject claims are disclosed and the claims are anticipated.

Preliminarily, applicants note that it is well settled that for a cited reference to qualify as prior art under 35 U.S.C. § 102, each element of the claimed invention must be disclosed within the reference. "It is axiomatic that for prior art to anticipate under 102 it has to meet every element of the claimed invention." Hybritec, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81 (Fed. Cir. 1986). Applicants respectfully submit that for the cited references to be anticipated references under 35 U.S.C. § 102, the references must disclose each and every element of the claimed invention. Therefore, the positions of the Examiner as summarized above with respect to Claims 1 and 3-13 are respectfully traversed as described below.

Patentable Distinctions Over U.S. Patent No. 3,663,576 to Meininger et al.

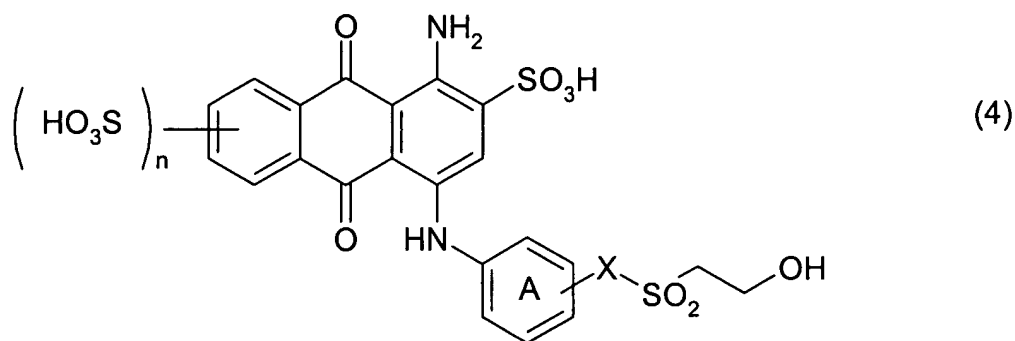
Meininger et al. discloses an anthraquinone dyestuff, which in the free acid form corresponds to the formula

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wherein X is a direct linkage, $-\text{CH}_2-$, $-\text{CH}_2\text{CH}_2-$, $-\text{NH}-$, or $-\text{N}(\text{lower alkyl})$; n is 0 or 1; and the benzene nucleus A may contain further substituents, such as alkyl, alkoxy, carbozyl- and/or cyano groups and/or chlorine or bromine atoms. See Meininger et al., abstract and column 1, lines 41-63.

Further, Meininger et al. describes the preparation of anthraquinone dyestuffs of general formula (1) by, inter alia, converting anthraquinone compounds of general formula (4) with phosphorylating agents into the corresponding phosphoric acid monoesters.

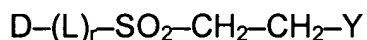


See Meininger et al., column 2, lines 22-34.

Indeed, in one embodiment of the present invention comprising an anthraquinone chromophoric moiety, see, e.g., page 4, line 25 of the published

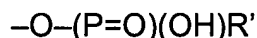
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PCT International patent application WO 01/25336 corresponding to the instant application [hereinafter the '336 published PCT application], the reactive dye compounds of the instant application can be prepared by reacting compounds characterized by formula (4) of Meininger et al. with compounds containing a suitable Y group, e.g., aceto diphosphonic acid, to produce reactive dye compounds having the formula:



wherein D is a chromophore group; r is 0 or 1; L is a linking group; and Y is a phosphonate or borate derivative.

Applicants note that the phosphate derivative comprising the Y group in the instant application preferably is selected from phosphonates having the formula



wherein R' is any suitable nucleophilic moiety. Suitable R' groups for use in the instant application are alkyl or aryl residues which contain at least one nucleophilic group substituent. Preferable R' groups and nucleophilic substituents of the R' groups are described on pages 5 and 6 of the '336 published PCT application. Importantly, the hydroxyl group is not included in the discussion of suitable R' groups in the '336 published PCT application. In fact, Claim 1 of the instant application preferably excludes phosphonates wherein the nucleophilic moiety comprising R' is OH. Thus, applicants

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respectfully assert that the instant application actually teaches away from the anthraquinone dye compounds disclosed in Meininger et al.

Additionally, a preferred Y group of the instant application is derived from aceto diphosphonic acid, i.e., a Y group with the formula:



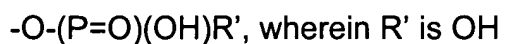
See, e.g., Claim 2 and page 6 of the '336 published PCT application. Applicants respectfully assert that anthraquinone dye compounds comprising this phosphoric acid diester group are not anticipated by the phosphoric acid monoesters disclosed in Meininger et al.

Applicants have amended Claims 1 and 3 to more particularly detail the subject matter of the present invention wherein the reactive dye compound claimed therein is subject to the proviso that if the phosphonate derivative is selected from phosphonates having the formula: $-\text{O}-(\text{P}=\text{O})(\text{OH})\text{R}'$, wherein R' is any suitable nucleophilic moiety, R' is not OH . Support for these amendments is found in the application as filed, particularly in Claim 1 as filed. Applicants respectfully assert that these amendments to Claims 1 and 3 expressly exclude anthraquinone dyestuffs of the free acid form corresponding to formula (1) in Meininger et al. and thus applicants respectfully assert that amended Claims 1 and 3 are not anticipated by Meininger et al.

Further, one of ordinary skill in the art would not be motivated by Meininger et al. to make anthraquinone dye compounds comprising a phosphonate group having the formula: $-\text{O}-(\text{P}=\text{O})(\text{OH})\text{R}'$, wherein R' is any

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nucleophilic moiety other than OH. Each of the anthraquinone dye compounds disclosed or claimed in Meininger et al. comprise a monoester phosphonate group having the formula:



Additionally, the reactive dye compounds of the instant application surprisingly exhibit a high Exhaustion Value and a high Fixation Value. See, e.g., the '336 published PCT application, Example 2, pages 12 and 13, especially page 13 lines 3 and 14. One of ordinary skill in the art would not be motivated by Meininger et al. to make anthraquinone dye compounds with such high Exhaustion and Fixation Values.

Applicants respectfully submit that in view of the above amendments and remarks the cited reference does not disclose each and every element of Claims 1 and 3 and applicants respectfully request that the rejection of Claims 1 and 3 under 35 U.S.C. § 102(b) be withdrawn and the claims allowed at this time. Further, Claims 4-13 depend from allowable Claims 1 and 3 and are also allowable since they merely recite the subject matter of Claims 1 and 3 and add additional limitations thereto.

New Claims

New Claims 18-20 have been added by the present amendment as indicated above.

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New Claims 18 and 19 are dependent from amended Claims 14 and 15, respectively, and recite a dye composition wherein the acid buffer is selected from citric acid, malic acid, fumaric acid and maleic acid, and mixtures thereof. Support for new Claims 18 and 19 can be found in the claims as originally filed.

New Claim 20 is dependent from amended Claim 15 and recites a dye composition in the form of a paste, further comprising water, thickening agent and an acid buffer, wherein the pH is preferably from about 2 to about 3. Support for new Claim 20 can be found on page 10, lines 12-14 of the '336 published PCT application and in original Claim 17.

No new matter is considered to have been added by the addition of new Claims 18-20 and applicants submit that new Claims 18-20 are in condition for allowance and respectfully request the same.

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CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. 50-0426.

Respectfully submitted,

JENKINS, WILSON & TAYLOR, P.A.

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